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News Summary

Articles on inside pages

A Berkeley researcher is waiting for the courts to settle the controversy that has arisen over his experiments with genetically engineered bacteria. Story on Page 5.

Copyright protection for "intellectual property," such as computer programs, will be a key question facing the next Register of Copyrights. Story on Page 15.

Many students spend the month between Christmas and the second semester working as interns in jobs related to their academic interests. Story on Page 19.

The State University of New York is the most over-regulated such institution in the country, according to a commission on the future of the 64-campus system. Story on Page 21.

College presidents who teach say they derive a great many benefits from the experience, but mostly they do it because they love it. Story on Page 25.

Universities with big-time football programs won some autonomy from the N.C.A.A. last week at the organization's annual convention in Nashville. Story on Page 31.

Promising young managers in China will begin a new graduate program in business administration designed by professors from the State University of New York at Buffalo. Story on Page 35.

ALSO IN THIS ISSUE

Athletics	31-34
Books	10, 29
Bulletin Board	46-47
Calendar of Events	41-45
Computers	14
Deadlines	45
Deaths	41
Fact-Files	21, 22
Gazette	41
Grants	41
Ideas	29
International News	35-38
Letters	39-40
Marginalia	2
News in Brief	2-3
Opinion	39
Personal & Professional	25-29
Philanthropy	23
Point of View	88
Scholarship	5-11
Students	19-20
Washington News	15-18

Clerical Workers Gaining Attention Through Unions

Now Columbia, like Yale, may face work stoppage

By SCOTT HELLER

Clerical and technical employees, called by some the "invisible workers" on college campuses, are being closely watched in their disputed efforts to organize at Columbia and Yale Universities.

Last week the union seeking to represent 1,100 such employees at Columbia set February 4 as a strike deadline if the university does not begin negotiations immediately.

And the 2,600 Yale workers represented by Local 34 of the Federation of University Employees, who returned to work during the holiday season after 10 weeks of picketing, could be back on the line by the end of this month.

The unions have announced "a pledge of mutual assistance," promising to bolster each other's picket lines if the time comes.

This flurry of activity at two Ivy League campuses has focused attention on universities as prime targets for the unionization of clerical workers. Yet the acrimony that has been generated at the two institutions—and in organizing drives at Harvard and Stanford Universities, among others—makes it clear that the effort to unionize white-collar employees is far from easy.

Such efforts are not new—especially in

Continued on Page 28, Column 1

STUDENT AID

Colleges Press for a United Front in Washington; State Funds Rise

State Funds *Washington*

By DONNA ENGELGAU

WASHINGTON

States' spending for grants and scholarships to needy college students rose more than 15 per cent in the past year, the highest percentage increase in 8 years and the biggest dollar increase in 16 years.

Only three states—Hawaii, Washington, and Wyoming—did not increase their scholarship aid during the year.

The National Association of State Scholarship and Grant Programs collected the data in a national survey.

States increased grants and scholarships to needy students by $160-million, or 15.4 per cent, from 1983-84 to 1984-85.

Aid to graduate students also increased, as did undergraduate aid not based on fi-

Continued on Page 20, Column 1

Ontario's Universities Seen in Jeopardy

The quality of Ontario's university system is in "jeopardy," a provincial commission said last week. It called for higher tuition, temporary limits on enrollment, increased faculty hiring, and more money from the government. Story on Page 35.

WASHINGTON

Leaders of public and private colleges, who have sometimes been at odds over federal student-aid policy, say they want to put aside past differences this year and pull together to support higher-education legislation that will benefit both types of institution.

The 99th Congress will be an especially important one for higher education. The Higher Education Act of 1965 officially expires in September, but another education statute authorizes a one-year extension so that programs would continue through academic 1986-87 without new legislation.

The act authorizes six major student-aid programs, along with dozens of programs to provide federal money for a wide range of activities—from college libraries to international education to disadvantaged students.

For those programs to continue, Congress must extend—or "reauthorize"—the law.

Because the legislation is so important, college and university presidents say, they hope to avoid the kind of infighting that has marked previous Congressional reauthorizations.

"The theme of this reauthorization has

Continued on Page 16, Column 1

'Plain Old Telephones' Give Way to Sophisticated Campus Systems

More universities installing own telecommunications; explosion of demand for services, AT&T breakup cited

By JUDITH AXLER TURNER

At Stanford University, stepping out the front door can be dangerous: Every day there is a new trench to trap the unwary pedestrian. The trenches are being dug to hold the cables for "Stanford Tel and Tel," the university's new $20-million telecommunications system.

Stanford is not the only university digging trenches. Across the country, institutions are changing, modernizing, and replacing their "POTS"—phone-company jargon for "plain old telephones"—with telecommunications systems that will cost less and do more than the systems that administrators and academics have taken for granted for decades.

The impetus for setting up new communications systems is twofold: the breakup of the American Telephone and Telegraph Company last January, and the demand for communications facilities that can accommodate data and video as well as voice.

The A.T.& T. breakup has driven prices up. Although most of the increase in cost is in long distance service—A.T.& T. no longer can use income from local services to hold down its long-distance charges—the new local phone companies are also increasing costs to pay for modernizing their equipment.

Academe has been hit particularly hard. One survey of 163 universities found they were spending an average of 1.2 per cent of their budget on communications, almost double the .65 per cent spent by business and industrial companies (not including airlines and financial institutions).

Technological advances, such as microcomputers on professors' and students' desks, electronic mail, and computerized library catalogs, have set off an explosion of demand for access to services—access that often must come over the same lines used for telephone conversations.

At issue are questions such as these:

► Should a college or university buy its

Continued on Page 12, Column 1

STANFORD UNIVERSITY

Michael M. Roberts stands in a trench that will hold cables for Stanford's new $20-million telecommunications system.

States' Student-Aid Spending Rose by More than 15 Pct. in Past Year

Continued from Page 1

nancial need. But those programs remained much smaller than those directed at needy students.

States will spend $1.195-billion on need-based undergraduate grants and scholarships this year, compared to $1.035-billion in 1983-84. State aid to needy undergraduates has increased 42.5 per cent since 1980-81, when the states spent $838.8-million on it.

The past year's 15.4-per-cent increase was particularly important, the association said in a report on its annual survey, because it represented the largest increase in any single year since 1976-77, when many states created new programs in response to the availability of new federal contributions under the State Student Incentive Grant Program.

"This year is exceptional in its significant growth in state grant programs in virtually every state. The rates of growth are seldom this large and are more often sporadic," the association said.

"My best guess as to why this year and last year showed large increases is that states are responding to the increased demands for aid caused by increasing costs," said Jerry S. Davis, director of research and policy analysis at the Pennsylvania Higher Education Assistance Agency. He and Kenneth R. Reeher, executive director of the agency, prepared the report for the association.

The survey also found that there had been a sharp reduction in the proportion of black students among recipients of state aid. That proportion has decreased from one-fourth to one-fifth since 1981, the report says. Mr. Davis said it was impossible to say precisely how much such students' share had declined, because many states did not respond to the survey question on the topic.

"The decline is probably a consequence of declining postsecondary education participation rates among black students rather than the result of changes in state grant program policies," the report said.

It called the growth of state aid during the 1980's "impressive, encouraging, and laudable. The fact that $357-million more dollars are available to students in 1984-85 than in 1980-81 represents a great achievement."

Most of the growth over the last four years—$192-million of the $357-million—has occurred in states with the largest programs, which include California, Illinois, New York, and Pennsylvania. The growth in New York's program alone accounted for 39 per cent of the growth.

College Costs Rise 40 Pct.

The report noted that the average cost of attending four-year private colleges, whose students typically receive about one-half of the state grants, had increased by about 40 per cent in the same period.

"Thus the four-year increase in available aid has roughly paralleled the growth in costs experienced by most aid recipients," the report says.

Since 1979 eight states have more than doubled the amount of student financial aid they offer. They are Arkansas, Louisiana, Massachusetts, Minnesota, Oklahoma, Puerto Rico, Rhode Island, and South Dakota.

Massachusetts, Minnesota, and Puerto Rico had the largest increases in spending in the past year.

Nine states will award more than $50-million each this year for a total of $1-billion, or about 71 per cent of the total of $1.4-billion awarded in all state programs. They are California, Illinois, Massachusetts, Michigan, Minnesota, New Jersey, New York, Ohio, and Pennsylvania.

This year 1,315,483 undergraduates will receive need-based state grants and scholarships, representing a 2.4-per-cent increase from 1983-84, when 1,285,041 undergraduates received such aid.

The survey found that the number of recipients had not grown as rapidly as the amount of money, and, as a result, individual students are getting more, on the average.

This year's average award is about $909, up 12.8 per cent from last year's $806. The average in 1980-81 was $735.

"The data indicate that more students are receiving more aid to attend postsecondary education, but that their average awards are not keeping pace with their increased average costs," the report said.

State spending for grants and scholarships to undergraduates that are not based on need—including merit scholarships and special-purpose awards to encourage students to study math and science—will rise to $122.7-million this year, the survey found, a 17.5-per-cent increase over last year's expenditure of $104.4-million.

Ten states are considering legislation to create merit-based scholarships: Georgia, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Nebraska, and New Jersey. Eight others are considering state-supported work-study programs: Arizona, Delaware, Iowa, New Jersey, Oklahoma, Oregon, Utah, and Virginia.

Maine and Massachusetts are considering programs to encourage talented students to enter teacher-training programs. Connecticut plans to adopt a "loan-forgiveness" program for talented students in teacher-education programs.

State aid to needy graduate and professional students will total $21.7-million this year, a 15.2-per-cent increase over last year's $18.9-million. The number of students who will receive the aid is expected to grow from 25,309 to 25,945.

Graduate Aid Restricted

"Clearly, graduate and professional-schools students' access to need-based grant aid is much more restricted than is undergraduates' access to this type of aid even in states with significant programs for post-baccalaureate students," the report said.

States will spend $9.9-million this year to provide graduate students with merit scholarships and other aid not based on financial need, a 37.8-per-cent increase over last year. Some 2,800 graduate students will receive such aid this year.

The data also indicated that more part-time and older students are receiving grants.

The number of part-time undergraduates receiving state aid has increased by 46 per cent since 1982, and the dollar amount has tripled. Even so, fewer than 2 per cent of all state grants go to part-time students, the report said.

About 16 per cent of this year's grant recipients will be over 25. In 1981, 11.8 per cent of the part-time students receiving aid were in that age group. The proportion has increased each year since then, the report said.

Copies of the survey report may be obtained for $5 each from the Pennsylvania Higher Education Assistance Agency, Towne House, 660 Boas Street, Harrisburg, Pa. 17102. Requests should be marked "Attention: Research and Statistics."

January Internships Offer Variety

Continued from Preceding Page

Ms. Popenoe, who says she must work in more lucrative jobs during the summer months to get herself through college.

"There isn't any kind of paid summer job like this I could get. The most I could be doing is washing test tubes, and that's not going to give me this kind of impression of whether I want to go into the field," she says.

Head Start on Careers

In addition to offering an experience that is logistically convenient, January internships give students—especially seniors—an advantage in their pursuit of careers. For many career-minded students, an internship's greatest value is its appearance on one's résumé.

Internships also let students meet people involved with fields in which they may have some interest. Ms. Cummings, of Wheaton, whose internship at NBC has consisted mostly of clerical work, says the experience has been invaluable because of the contacts she is making at the company.

"In a big place like this, they only hire you if you know someone, or if you've had an internship," she says. "I don't know anyone. So if I ever want to work here, it'll help."

For other students, internships are simply a way to explore a more academic interest or to settle a decision about a possible major.

Shawn B. King, a freshman at Oberlin, says he has collected rocks and fossils since he was seven or eight years old. After taking his first college geology course last semester, he is trying to choose between majoring in biology and geology.

This month, he has helped to inventory some of the 80 million fossil specimens in the collection of the National Museum of Natural History at the Smithsonian Institution.

In a dark, back storeroom at the museum, he has handled about 250 pieces of petrified wood a day, cleaning each piece and checking the specimen's label against an inventory list. Mr. King's project will help the museum to move the collection to a new storage facility in Virginia.

"It's not particularly exciting. I'm not learning anything particularly scientific. But it is exciting to work with a collection of this size," he says.

Considering the brevity of their stints, students in many jobs are charged with surprisingly large responsibilities.

Ahrin A. Mishan, a Bennington junior, has been reading screenplays submitted to Orion Pictures and recommending to company executives whether to accept or reject them.

"I was sitting here the other day thinking, 'What am I doing reading this guy's script? I'm just a college student. This guy's been writing these things for years,' " he recalls.

Rebecca Morton, working as a teacher's aide at San Francisco's Presidio Hill School, says her biggest surprise has been "how much responsibility the employers are willing to give these kids they've never met before, who just call them on the phone and ask for jobs."

'They Force Me to Think'

The Bennington sophomore's surprise nearly turned into fear, she said, when the teacher for whom she is working was sick and Ms. Morton was left to teach a class of 8- and 9-year-olds for a day. "Mostly, I played disciplinarian," she says.

Often the internship experience is as beneficial to the employer as to the student. While much of the work of interns may be dull and clerical, it is sometimes necessary work for the employer.

And, say some, undergraduates often bring more than extra hands. Eric B. Brettschneider, executive assistant to the borough president of Queens, New York, says he has given internships to Colgate students almost every year since he graduated from the university in 1968.

"They force me to think about what I'm doing on a day-to-day basis," he says. "They bring a fresh perspective that demands that you look at what you're doing."

4 Years' Change in Student Aid

(In millions of current dollars)

	1980-81	1981-82	Estimated 1982-83	Estimated 1983-84	Estimated 1984-85	Percentage change 1980-81 to 1984-85
Federally supported programs:						
Generally available aid:						
Pell Grants	$ 2,387	$ 2,299	$ 2,420	$ 2,785	$ 2,773	+ 16.2%
Supplemental Grants	366	362	343	353	374	+ 2.2%
College Work-Study	658	624	630	700	664	+ 0.9%
State Student Incentive Grants	76	77	73	60	76	0.0%
National Direct Student Loans	695	580	595	595	585	− 15.8%
Guaranteed Student Loans and Parent Loans for Undergraduate Students	6,204	7,307	6,609	7,798	8,466	+ 36.5%
Specially directed aid:						
Social Security	1,883	1,996	733	220	35	− 98.1%
Veterans	1,714	1,351	1,356	1,056	836	− 51.2%
Other grants	119	102	82	60	60	− 49.6%
Other loans	61	88	157	198	279	+ 357.4%
Total federal aid	$14,164	$14,785	$12,999	$13,825	$14,148	− 0.1%
State grant programs	801	921	1,006	1,126	1,257	+ 56.9%
Institutionally awarded aid	2,138	2,323	2,425	2,512	2,634	+ 23.2%
Total federal, state, and institutional aid	$17,104	$18,028	$16,430	$17,464	$18,040	+ 5.5%

(In millions of constant 1982 dollars)

	1980-81	1981-82	Estimated 1982-83	Estimated 1983-84	Estimated 1984-85	Percentage change 1980-81 to 1984-85
Federally supported programs:						
Generally available aid:						
Pell Grants	$ 2,660	$ 2,358	$ 2,379	$ 2,643	$ 2,509	− 5.7%
Supplemental Grants	408	371	337	335	338	− 17.2%
College Work-Study	734	640	619	664	601	− 18.1%
State Student Incentive Grants	85	79	72	57	69	− 18.8%
National Direct Student Loans	774	595	585	565	529	− 31.7%
Guaranteed Student Loans and Parent Loans for Undergraduate Students	6,914	7,494	6,497	7,401	7,660	+ 10.8%
Specially directed aid:						
Social Security	2,099	2,047	721	209	32	− 98.5%
Veterans	1,911	1,385	1,333	1,003	757	− 60.4%
Other grants	132	105	81	57	54	− 59.1%
Other loans	68	90	155	188	253	+ 272.1%
Total federal aid	$15,785	$15,162	$12,778	$13,122	$12,802	− 18.9%
State grant programs	893	944	989	1,069	1,137	+ 27.3%
Institutionally awarded aid	2,383	2,382	2,384	2,384	2,384	0.0%
Total federal, state, and institutional aid	$19,062	$18,489	$16,151	$16,575	$16,323	− 14.4%

Note: Current dollars are converted to constant 1982 dollars on the basis of the Consumer Price Index for 1982. Details may not add to totals because of rounding.

SOURCE: COLLEGE BOARD

FACT–FILE

Estimated State Student Aid, 1984-85

Undergraduate

	Need-based assistance			Non-need-based assistance		
	Dollars paid out	Number of awards	Average award amount	Dollars paid out	Number of awards	Average award amount
Alabama	$2,192,000	2,328	$942	$3,866,000	7,925	$488
Alaska	241,000	161	1,497	—	—	—
Arizona	2,576,000	3,584	719	—	—	—
Arkansas	4,221,000	11,667	362	200,000	100	2,000
California	101,019,000	64,535	1,565	—	—	—
Colorado	8,740,000	14,462	604	6,835,000	11,779	580
Connecticut	9,876,000	11,780	838	—	—	—
Delaware	633,000	1,020	621	206,000	204	1,010
D.C.	959,000	694	1,382	—	—	—
Florida	14,026,000	21,036	667	14,051,000	15,366*	914*
Georgia	4,216,000	14,147	298	10,724,000	16,616*	645*
Hawaii	493,000*	1,400*	352*	—	—	—
Idaho	478,000	786	608	127,000	84	1,512
Illinois	111,100,000	105,350	1,055	1,065,000	1,572*	677*
Indiana	32,697,000	37,762	866	437,000	871*	502*
Iowa	22,423,000	14,545	1,542	1,524,000	5,774	264
Kansas	4,841,000	6,050	800	—	—	—
Kentucky	8,648,000	14,540	595	—	—	—
Louisiana	2,163,000	3,550	609	1,247,000	8,085	154
Maine	547,000	2,253	243	—	—	—
Maryland	7,361,000	14,066	523	1,425,000	1,722	828
Massachusetts	38,663,000	44,062	877	845,000	826	1,023
Michigan	34,477,000	32,407	1,064	15,615,000	47,100	332
Minnesota	50,700,000	62,000	818	—	—	—
Mississippi	1,286,000	1,189*	1,082*	1,067,000	193*	3,560*
Missouri	9,145,000	9,000	1,016	—	—	—
Montana	400,000	1,200	333	—	—	—
Nebraska	1,089,000	1,850	589	—	—	—
Nevada**	414,000	828*	500*	—	—	—
New Hampshire	593,000	1,443	411	3,000	10	300
New Jersey	56,752,000	65,480	867	55,000	34	1,618
New Mexico	1,025,000	1,700	456*	—	—	—
New York	385,360,000	336,000	1,114*	22,201,000	67,000	266*
North Carolina	4,668,000	7,120	656	18,122,000	24,200	749
North Dakota	713,000	1,610	443	—	—	—
Ohio	45,205,000	71,650	630	10,094,000	11,928	846
Oklahoma	6,655,000	13,500	493	—	—	—
Oregon	9,293,000	15,816	588	—	—	—
Pennsylvania	91,148,000	120,730	755	566,000	292	1,938
Rhode Island	7,737,000	11,700	661	—	—	—
South Carolina	13,728,000	7,000	1,961	—	—	—
South Dakota	531,000*	1,273*	417*	—	—	—
Tennessee	8,833,000	17,808	496	110,000	138	797
Texas	24,787,000	21,989	1,127	—	—	—
Utah	1,804,000	1,739	1,037	545,000	365	1,493
Vermont	7,558,000	9,583	789	—	—	—
Virginia	4,420,000	6,500	680	11,721,000	11,918	983
Washington	7,095,000	11,904	596	28,000	20*	1,400*
West Virginia	4,877,000	6,400	762	—	—	—
Wisconsin	25,239,000	36,807	686	—	—	—
Wyoming	204,000*	279*	731*	—	—	—
Puerto Rico**	11,505,000	49,200	234	—	—	—
Total	**$1,195,354,000**	**1,315,483**	**$909**	**$122,679,000**	**234,122**	**$ 524**

Graduate and Professional

	Need-based assistance			Non-need-based assistance		
	Dollars paid out	Number of awards	Average award amount	Dollars paid out	Number of awards	Average award amount
Alabama	$ 68,000	72	$ 944	$ 240,000	75	$ 3,200
Alaska	—	—	—	1,834,000	n/a	n/a
Arizona	10,000	16	625	—	—	—
California	3,448,000	1,103	3,126	—	—	—
Colorado	754,000	625	1,206	985,000	700	1,407
Connecticut	—	—	—	100,000	10	10,000
Delaware	112,000	180	622	16,000	4	4,000
D.C.	147,000	106	1,387	—	—	—
Florida	7,000	9	778	54,000	367	147
Georgia	—	—	—	500,000	n/a	n/a
Idaho	31,000	39	795	—	—	—
Indiana	—	—	—	200,000	n/a	n/a
Louisiana	—	—	—	95,000	77	1,234
Maryland	399,000	619	645	39,000	22	1,773
Massachusetts	2,250,000	1,640	1,372	—	—	—
Michigan	1,346,000	930	1,447	—	—	—
Mississippi	—	—	—	262,000	138*	1,594*
New Hampshire	3,000	7	429	439,000	n/a	n/a
New Jersey	650,000	222	2,928	400,000	100*	4,000*
New York	7,640,000	14,000	546	2,312,000	n/a	n/a
North Carolina	919,000	376	2,444	—	—	—
Ohio	—	—	—	200,000	50	4,000
Oklahoma	1,083,000	1,500	722	—	—	—
Oregon	73,000	36	2,028	—	—	—
Tennessee	—	—	—	90,000	112	804
Texas	2,114,000	1,561	1,354	—	—	—
Utah	2,000	1	2,000	1,094,000	106	10,320
Vermont	112,000	82	1,366	—	—	—
Virginia	—	—	—	1,006,000	1,032	975
Wyoming	36,000*	21*	1,714*	—	—	—
Puerto Rico	590,000	2,800	211	—	—	—
Total	**$21,794,000**	**25,945**	**$840**	**$9,866,000**	**2,793**	**$3,532**

n/a not available.
* Indicates 1983-84 data.
** Data could not be broken down into graduate versus undergraduate categories, and are included in undergraduate totals.
Note: This table shows most of the money that states spend on student aid. However, some states may spend more through programs that are not specifically identified as student-aid programs. Totals include 1983-84 appropriations where 1984-85 figures are not available.

SOURCE: NATIONAL ASSOCIATION OF STATE SCHOLARSHIP AND GRANT PROGRAMS

Panel Says Over-Regulation Leaves SUNY 'Tied in Knots'

By JEAN EVANGELAUF
NEW YORK

The State University of New York is inferior to the nation's leading state universities because it is the most over-regulated such institution in the country, according to a blue-ribbon commission on the future of the 64-campus system.

Harold L. Enarson, co-chairman of the commission and a former president of the Ohio State University, said, "SUNY is tied in knots. It has the illusion of accountability, but not the reality of accountability."

The commission called on the state legislature to give SUNY's board of trustees greater financial and managerial flexibility. Treating SUNY like a typical state agency has led to procedures that are at odds with collegial traditions, the commission said.

"New York State runs its university like it runs its prisons," said one commission member.

State budget and review agencies have to approve even the most routine personnel shifts and purchase orders, the panel said. Campus presidents lack the authority to transfer a secretary from one department to another, or to order new equipment.

"The state government does not seem to trust SUNY's board of trustees, chancellor, or campus presidents with even the most elementary administrative decisions concerning the institution they have been asked to manage," the report said.

"We have no doubt that the manpower cost of meeting state procedures atypical in university management runs into the tens of millions of dollars annually," the report continued. Such bureaucratic constraints are making it difficult to recruit top faculty members and administrators, added Donald M. Blinken, chairman of the SUNY board.

As a consequence, the university is lagging in graduate education and not contributing enough to the economic development of the state.

The commission recommended that SUNY be restructured as a "public benefit corporation," an organization that has greater managerial flexibility than the typical state agency. It called on the legislature to give appropriations to the trustees in a lump sum, with the trustees then allocating lump sums to the campuses. Should revenues fall short of expectations, the campus presidents and trustees should have the discretion to make cuts, the report said.

The report said the board of trustees should have the final authority to develop and administer budgets, define the mission of each institution and allocate resources among them to avoid duplication, and establish the salaries of top administrators.

Reaction Favorable

Mr. Blinken said the trustees' initial reaction to the report was favorable, adding, "We'd like to have the real responsibility for running the system."

Clifton R. Wharton, Jr., the chancellor of SUNY, called the plan a "creative, innovative possibility."

Kenneth LaValle, chairman of the state senate's higher-education committee, said that both of the legislature's higher-education committees would hold hearings this spring on giving SUNY greater flexibility.

Gov. Mario M. Cuomo said he approved of the idea of greater financial flexibility and that the commission's recommendations should be studied.

The 15-member commission of educators, businessmen, union leaders, and politicians began meeting last February.

The university system, which is the nation's largest, comprises 4 university centers, 2 health-science centers, 13 arts-and-sciences colleges, 4 specialized colleges, 6 agricultural and technical colleges, 5 statutory colleges, and 30 community colleges. The campuses provide instruction in more than 3,700 academic programs leading to 49 degrees. Enrollment last fall was about 382,000. For the 1984-85 academic year the budget for operations is nearly $1.1-billion.

'High-Stakes Poker Game'

Due to overregulation and the fact that the system, established in 1948, was originally intended to supplement the state's strong independent colleges and universities, the university has not developed top-flight graduate and professional programs, the report said.

"SUNY is engaged in a high-stakes poker game for top academic talent," Mr. Enarson said, and it is not improving enough to rival the state universities in California, Minnesota, and Texas.

To bolster academic programs, the commission called for greater differentials in faculty and administrative salaries among SUNY's units and different levels of aid for libraries and research facilities, instead of across-the-board increases.

The university centers at Buffalo and Stony Brook "should be developed much more energetically as resources for the system as a whole," while the centers at Albany and Binghamton should specialize in selected areas, the report said.

Although admitting that the many small SUNY campuses were expensive to operate, the commission decided not to recommend closing any of them because it would be politically divisive and reduce student access. The report did call for additional study of retrenchment proposals.

New York loses more students to out-of-state institutions than it attracts, but an improved SUNY could reverse that trend, according to the commission. If that were accomplished, "the number of additional students could offset even extremely pessimistic forecasts of future decline at the state-operated campuses," the report said.

Among other recommendations:

► More money should be spent to repair facilities and recruit outstanding students and faculty members.

► The legislature, in making its appropriations, should seek to meet or exceed the national average percentage of tax revenues spent by states for higher education.

► The university should develop programs to increase the retention of undergraduates who are minority-group members.

► Campuses should be able to generate and keep additional revenues "so that reductions in support are not the inevitable consequence of successful innovation."

► There should be greater cooperation in research among SUNY campuses and with other universities and private industry.

FACT–FILE

Fall 1983 Enrollment

By type and control of institutions

	All students			Full-time students			Part-time students		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Public institutions									
Doctoral	2,410,724	1,264,094	1,146,630	1,822,398	985,965	836,433	588,326	278,129	310,197
Comprehensive	2,208,259	1,036,273	1,171,986	1,450,817	709,976	740,841	757,442	326,297	431,145
General baccalaureate	397,002	188,297	208,705	242,802	120,511	122,291	154,200	67,786	86,414
2-year	4,456,073	1,983,366	2,472,707	1,614,670	802,650	812,020	2,841,403	1,180,716	1,660,687
All*	9,682,734	4,610,038	5,072,696	5,299,115	2,737,067	2,562,048	4,383,619	1,872,971	2,510,648
Private institutions									
Doctoral	632,688	351,807	281,081	461,036	266,337	194,699	171,852	85,470	86,382
Comprehensive	669,089	337,275	331,814	422,749	215,520	207,229	246,340	121,755	124,585
General baccalaureate	752,859	331,236	421,623	574,378	262,129	312,249	178,481	69,107	109,374
2-year	269,306	121,291	148,015	214,558	99,927	114,631	54,748	21,364	33,384
All*	2,781,927	1,413,687	1,368,240	1,961,935	1,022,720	939,215	819,992	390,967	429,025
All institutions									
Doctoral	3,043,612	1,615,901	1,427,711	2,283,434	1,252,302	1,031,132	760,178	363,599	396,579
Comprehensive	2,877,348	1,373,548	1,503,800	1,873,566	925,496	948,070	1,003,782	448,052	555,730
General baccalaureate	1,149,861	519,533	630,328	817,180	382,640	434,540	332,681	136,893	195,788
2-year	4,725,379	2,104,657	2,620,722	1,829,228	902,577	926,651	2,896,151	1,202,080	1,694,071
All*	**12,464,661**	**6,023,725**	**6,440,936**	**7,261,050**	**3,759,787**	**3,501,263**	**5,203,611**	**2,263,938**	**2,939,673**

By student level

Undergraduate									
Doctoral	2,096,918	1,104,076	902,842	1,804,872	963,028	841,844	292,046	141,048	150,998
Comprehensive	2,201,406	1,063,556	1,137,850	1,711,407	839,364	872,043	489,999	224,192	265,807
General baccalaureate	988,055	448,822	539,233	789,379	367,369	422,010	198,676	81,453	117,223
2-year	4,008,032	1,805,552	2,202,480	1,742,984	859,218	883,766	2,265,048	946,334	1,318,714
All*	9,707,171	4,678,321	5,028,850	6,363,707	3,226,937	3,136,770	3,343,464	1,451,384	1,892,080
First-time freshmen									
Doctoral	388,681	197,188	191,493	367,466	187,409	180,057	21,215	9,779	11,436
Comprehensive	415,291	196,167	219,124	367,191	174,433	192,758	48,100	21,734	26,366
General baccalaureate	234,082	106,476	127,606	207,983	95,727	112,256	26,099	10,749	15,350
2-year	1,308,268	597,432	710,836	664,245	324,577	339,668	644,023	272,855	371,168
All public*	1,918,113	900,656	1,017,457	1,220,843	603,354	617,489	697,270	297,302	399,968
All private*	525,590	258,393	267,197	457,228	221,255	235,973	68,362	37,138	31,224
All*	2,443,703	1,159,049	1,284,654	1,678,071	824,609	853,462	765,632	334,440	431,192
Graduate									
Doctoral	591,449	325,376	266,073	317,660	188,040	129,620	273,789	137,336	136,453
Comprehensive	381,388	177,700	203,688	86,716	44,181	42,535	294,672	133,519	161,153
General baccalaureate	30,982	13,931	17,051	5,909	3,184	2,725	25,073	10,747	14,326
2-year	2,113	1,439	674	413	193	220	1,700	1,246	454
All*	1,104,808	577,448	527,360	456,625	264,576	192,049	648,183	312,872	335,311
First professional									
Doctoral	131,696	85,408	46,288	123,848	80,585	43,263	7,848	4,823	3,025
Comprehensive	40,325	25,770	14,555	33,553	21,438	12,115	6,772	4,332	2,440
General baccalaureate	7,594	5,455	2,139	6,125	4,334	1,791	1,469	1,121	348
Specialized	96,099	69,504	26,595	83,755	61,057	22,698	12,344	8,447	3,897
All*	278,529	188,096	90,433	249,636	169,071	80,565	28,893	19,025	9,868
Unclassified									
All	1,374,153	579,860	794,293	191,082	99,203	91,879	1,183,071	480,657	702,414

By state

	Public institutions	Private institutions	Total
Alabama	149,986	21,395	171,381
Alaska	25,084	961	26,045
Arizona	201,281	12,156	213,437
Arkansas	65,483	11,219	76,702
California	1,529,005	201,842	1,730,847
Colorado	152,419	20,231	172,650
Connecticut	102,720	61,624	164,344
Delaware	27,898	4,047	31,945
District of Columbia	14,270	66,097	80,367
Florida	357,286	86,150	443,436
Georgia	154,142	47,311	201,453
Hawaii	46,241	5,824	52,065
Idaho	34,418	8,493	42,911
Illinois	516,720	156,364	673,084
Indiana	196,917	59,553	256,470
Iowa	109,652	43,316	152,968
Kansas	127,166	14,543	141,709
Kentucky	116,323	30,180	146,503
Louisiana	155,470	24,177	179,647
Maine	33,829	19,518	53,347
Maryland	206,704	32,528	239,232
Massachusetts	185,979	237,369	423,348
Michigan	444,229	71,531	515,760
Minnesota	168,259	45,960	214,219
Mississippi	97,864	11,864	109,728
Missouri	177,061	71,268	248,329
Montana	33,744	4,133	37,877
Nebraska	77,609	17,553	95,162
Nevada	43,379	389	43,768
New Hampshire	26,456	26,687	53,143
New Jersey	250,861	63,607	314,468
New Mexico	63,355	2,739	66,094
New York	579,465	443,056	1,022,521
North Carolina	242,034	59,641	301,675
North Dakota	34,770	2,821	37,591
Ohio	395,209	140,383	535,592
Oklahoma	151,288	22,883	174,171
Oregon	122,603	18,569	141,172
Pennsylvania	307,387	237,725	545,112
Rhode Island	35,581	35,230	70,811
South Carolina	106,779	27,753	134,532
South Dakota	26,158	8,721	34,879
Tennessee	159,061	48,716	207,777
Texas	702,847	92,894	795,741
Utah	68,255	35,069	103,324
Vermont	18,656	12,650	31,306
Virginia	251,099	37,489	288,588
Washington	199,391	30,248	229,639
West Virginia	71,715	11,487	83,202
Wisconsin	241,788	35,963	277,751
Wyoming	23,844	0	23,844
U.S. Service Schools	52,994	0	52,994
Total	**9,682,734**	**2,781,927**	**12,464,661**
American Samoa	845	0	845
Guam	3,436	0	3,436
North Marianas	173	0	173
Puerto Rico	59,557	101,658	161,215
Trust Territories, Pacific Islands	736	0	736
Virgin Islands	2,864	0	2,864

Includes students enrolled in specialized institutions and new institutions not yet classified.

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